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			ENC	OSURES (Check all tha	t apply)			
Fee Transmittal Form  Fee Attached  Amendment/Reply  After Final  Affidavits/declaration(s)  Extension of Time Request  Express Abandonment Request  Information Disclosure Statement  Certified Copy of Priority  Document(s)				After Allowance communication to Technology Center (TC)  Appeal Communication to Board of Appeals and Interferences Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)  Proprietary Information			y Center (TC) munication to Board nd Interferences munication to TC e, Brief, Reply Brief) nformation  sure(s) (please v):	
		SIGNA	TURE C	F APPLICANT, ATTORN	IEY, OF	RAGENT		
Individual name Signature Date  I hereby certify that sufficient postage a	or Individual name Signature  Winston Hsu, Reg. No.: 41,526  Winston Hsu, Reg. No.: 41,526							
Typed or printed na	ime							
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# for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

Applicant claims small entity status. See 37 CFR 1.27

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Complete if Known				
Application Number	10/707,802			
Filing Date	01/13/2004			
First Named Inventor	Yung-Chuan Tseng			
Examiner Name				
Art Unit				
Attorney Docket No.	OTMP0061USA			

METHOD OF PAYMENT (check all that apply)				FEE CALCULATION (continued)					
Check Credit card Money Other None				3. ADDITIONAL FEES Large Entity , Small Entity					
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Account Number	30-0601			1051	130	2051	65	Surcharge - late filing fee or oath	
Deposit Account	North Ameri	ca International Paten	t Office	1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
Name The Director is	s authorized to	: (check all that apply)		1053	130	1053	130	Non-English specification	
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1001 770	2001 385	Utility filing fee		1255	2,010	2255	1,005	Extension for reply within fifth month	<b></b>
1002 340	2002 170	Design filing fee		1401	330	2401	165	Notice of Appeal	
1003 530	2003 265	Plant filing fee	$\vdash$	1402	330	2402	165	Filing a brief in support of an appeal	
1004 770	2004 385	Reissue filing fee		1403	290	2403	145	Request for oral hearing	
1005 160	2005 80	Provisional filing fee		1451	1,510	1451	1,510	Petition to institute a public use proceeding	
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1202 18 1201 86	2202 9 2201 43			1809	770	2809	385	Filing a submission after final rejection (37 CFR 1.129(a))	
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SUBMITTED BY				(Complete	(if applicable))	ב
Name (Print/Type)	Winston Hsu	11-4	Registration No. (Attorney/Agent). 41,526	Telephone	886289237350	7
Signature		Vindo,	n Hass	Date	3/12/201	3

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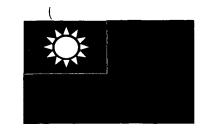
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## **DECLARATION** — Supplemental Priority Data Sheet

Additional foreign app	lications:				
Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy YES	Attached? NO
092202467	Taiwan R.O.C	02/12/2003		7	

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## 中華民國經濟部智慧財產局

INTELLECTUAL PROPERTY OFFICE MINISTRY OF ECONOMIC AFFAIRS REPUBLIC OF CHINA

茲證明所附文件,係本局存檔中原申請案的副本,正確無訛

其申請資料如下

This is to certify that annexed is a true copy from the records of this office of the application as originally filed which is identified hereunder:

申 請 日: 西元 2003 年 02 月 12 日

Application Date

申 請 案 號: 092202467

Application No.

申 請 人: 中強光電股份有限公司

Applicant(s)

*)* \

局

長

Director General







2003

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16

\_\_\_ 月\_\_\_\_日

發文日期: Issue Date

發文字號: 09220933390

西元

Serial No.



申請日期:	IPC分類
申請案號:	

以上各欄		新型專利說明書
_	中文	背投影電視排氣結構
新型名稱	英文	EXHAUSTING STRUCTURE FOR A REAR PROJECTION TV
	姓 名 (中文)	1. 曾湧泉 2. 周博斌 3. 袁一誠
<del>-</del>		1. Tseng Yung Chuan 2. Bor-Bin Chou 3. Yuan Yi Cheng
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	住居所 (英 文)	1. No 11, Li Hsing Rd, Science-Based Industrial Park, Hsinchu, R.O.C. 2. No 11, Li Hsing Rd, Science-Based Industrial Park, Hsinchu, R.O.C. 3. No 11, Li Hsing Rd, Science-Based Industrial Park, Hsinchu, R.O.C.
	名稱或 姓 名 (中文)	1. 中強光電股份有限公司
	名稱或 姓 名 (英文)	1. Coretronic Corporation
Ξ	國 籍 (中英文)	1. 中華民國 TW
申請人 (共1人)		1. 新竹科學工業園區新竹市力行路11號 (本地址與前向貴局申請者相同)
	住居所 (營業所) (英 文)	
	代表人 (中文)	1. 張威儀
	代表人 (英文)	1. Wade Chang

#### 四、中文創作摘要 (創作名稱:背投影電視排氣結構)

一種背投影電視排氣結構,係在背投影電視內部設立一隔離通風室,以通風室將光學引擎與殼體分隔,且於通風室中鄰近光學引擎一側設置一排氣風扇,抽吸背投影電視內部熱氣,進入一吸音材質且彎曲形狀之導風管,將熱氣經導風管引導,由設於通風室另一側出風口排出,將排氣風扇覆蓋隔離,以減少噪音。

陸、英文創作摘要 (創作名稱:EXHAUSTING STRUCTURE FOR A REAR PROJECTION TV)

A exhausting structure for a rear projection TV installs a isolated ventilation chamber in TV to divide an optical engine from a TV housing. A exhausting fan is placed on one side of the ventilation chamber near the optical engine. Cooling air in TV is sucked by the exhausting fan, enters into a guarding elbow made of soundabsorbing material, and exhausted out of a vent on the other side of the ventilation chamber. The ventilation chamber covers the exhausting fan to reduce noise.





四、中文創作摘要 (創作名稱:背投影電視排氣結構)

伍、(一)、本案代表圖為:第\_\_\_3\_\_\_圖

(二)、本案代表圖之元件代表符號簡單說明:

- 20 背投影電視 2 1 通風室 22 排氣風扇 導風管 23 24 出風口 25 26 光學引擎
- 28 蓋板 29 栅 欄

殼 體

隔板

2 7

陸、英文創作摘要 (創作名稱: EXHAUSTING STRUCTURE FOR A REAR PROJECTION TV)



一、本案已向			
國家(地區)申請專利	申請日期	案號	主張專利法第一百零五條準用第二十四條第一項優先權
二、□主張專利法第一百	零五條準用第二十	五條之一第一項	i 優 先權:
申請案號:			
日期:		Þ	
三、主張本案係符合專利	法第九十八條第一	·項□第一款但書	·或□第二款但書規定之期間
日期:			
		•	



#### 五、創作說明 (1)

#### 【新型所屬之技術領域】



本創作係有關於背投影電視,尤其是背投影電視出風口之排氣結構。

#### 【先前技術】

近年來,背投影電視利用光學影像投射技術將影像放大,提供低價的大尺寸電視,而廣受消費者喜愛,由於影像投射需藉助高功率燈泡作為照明光源,以獲得高亮度畫面,因此需要風扇冷卻高溫燈泡及受熱之光學元件,以提高燈泡壽命,及維持光學元件最佳效能之工作溫度。

因此,習知背投影電視10就在靠近光學引擎12附近之背面外殼11上,設置排氣風扇16,以強迫方式將主要





#### 五、創作說明 (2)

熱源光學引擎12之熱氣就近排出外殼11,且為提高排氣效果,排氣風扇16直接設在外殼11上。然此種配置,外樓排氣風扇16轉動及風切噪音,會毫無遮攔直接外傳形成雜音,光學引擎12高亮度影像光東亦會穿過排氣風扇16風扇轉動空隙而外洩射在附近牆壁或物體上形成反射光,對需較暗觀賞背景之背投影電視10 計面無法靠牆放置,形成擺設限制等缺陷。

#### 【新型內容】

本創作之目的在提供一種背投影電視排氣結構,藉內藏獨立式排氣風扇,有效隔絕風扇轉動風切噪音。

本創作另一目的在提供一種背投影電視排氣結構,以彎曲導風管遮蔽雜散光防止外洩,並引導熱氣排出,避免產生熱回流,以提高散熱效果。

本創作又一目的在提供一種背投影電視排氣結構,適當配置出風口,以減少擺設空間限制。

本創作再一目的在提供一種背投影電視排氣結構,藉隔離式通風室,減少灰塵污染光學元件。

為達成上述之目的,本創作係在背投影電視內部設立一隔離通風室,以通風室將光學引擎與殼體分隔,且於通風室中鄰近光學引擎一側設置一排氣風扇,抽吸背投影電視內部熱氣,進入一吸音材質且變曲形狀之導風管,將熱氣經導風管引導,由設於通風室另一側出風口排出,將排氣風扇覆蓋隔離,以減少噪音。





#### 五、創作說明 (3)

#### 【實施方式】

有關本創作為達成上述目的,所採用之技術手段及其餘功效,茲舉一較佳實施例,並配合圖式加以說明如下。

請參閱圖2,本創作實施例之背投影電視排氣結構,主要係在背投影電視20內部一側通風室21中,設置一排氣風扇22與導風管23。藉由排氣風扇22吸出背投影電視20內部熱氣,經導風管23引導,由設於通風室21外側之出風口24,排出背投影電視20外部。

其中,背投影電視20具有一殼體25,殼體25底部設一光學引擎26,光學引擎26之照明光源261設於光學引擎26一側,光源261附近設一隔板27,今隔板27與殼體25將背投影電視20一側下部隔成通風室21,隔板27上方連接一加強強度之支撐架271,且於隔板27近光源261位置挖設一通孔272,殼體25上相對通孔272位置設置一出風口24,出風口24上方之殼體25內側設另一加強支撐架241,並於兩支撑架271、241上覆蓋一蓋板28,使通風室21形成一獨立空間,以隔離光學引擎26光線及光源261熱空氣

如圖3所示,排氣風扇22係裝設在通孔272內,鄰近主要熱源之照明光源261,出風口24則裝設一柵欄29,柵欄29具有向下傾導葉片291,一彎曲導風管23設在通風室21內,該通風管23可為橡膠或吸音材質所製成,以增加噪音吸收效果,通風管23一端套設在排氣風扇22排氣端





#### 五、創作說明 (4)

,另一端則連通至柵欄29,以引導熱氣排出。

本創作之背投影電視排氣結構,如圖4所示,光學引擎26及電子零件(未圖示)所產生之熱量,係藉由設於隔板27且靠近熱源之排氣風扇22抽吸,導入流線形導風管23,引導排出柵欄29,以避免熱氣聚積於背投影電20或通風室21產生熱回流,增加背投影電視內部散熱效果出外,由於排氣風扇22係設於內層隔板27上,不僅影響此外層柵欄29隔離,防止排氣風扇22直接曝露於背投影中側視20外,且以通風室21覆蓋隔離,再加上吸音材質之時風管23,多道阻絕噪音,可將排氣風扇22轉動與風切噪音有效隔絕,以提高觀賞環境品質。

另外,本創作導風管23 藉適當彎曲形狀,以阻絕光源26 之光束經由排氣風扇22 直接通過柵欄29 外漏,由導風管23 與柵欄29 兩道防線,可有效遮住光束防止外漏,同時該彎曲導風管23 與具有導葉片291 柵欄29 ,再配合通風室21 隔離背投影電視20 內部,亦可減少灰塵侵入光學引擎26 ,防止污染光學元件,維持投影影像畫質。再者,柵欄29 設於背投影電視20 殼體25 側邊,該殼體25 側邊斜向後內縮,可使殼體25 側邊不致於緊貼相鄰物體,留出柵欄29 排出熱氣空間,減少擺放限制。

以上所述者,僅為用以方便說明本創作之較佳實施例,本創作之範圍不限於該較佳實施例,凡依本創作所作的任何變更,於不脫離本創作之精神下,皆屬本創作申請專利之範圍。





#### 圖式簡單說明

#### 【圖式簡單說明】

- 圖1 顯示習知背投影電視之結構示意圖。
- 圖2 顯示本創作背投影電視排氣結構之零件圖。
- 圖3 顯示本創作背投影電視排氣結構之組合圖。
- 圖4 顯示本創作背投影電視排氣結構之作動示意圖

#### 【主要部分代表符號】

- 20 背投影電視
- 22 排氣風扇
- 24 出風口
- 26 光學引擎
- 27 隔板
- 272 通孔
- 29 柵欄

- 21 通風室
- 23 導風管
- 25 殼體
- 261 光源
- 241、2.71 支撑架
- 28 蓋板
- 291 導葉片



#### 六、申請專利範圍

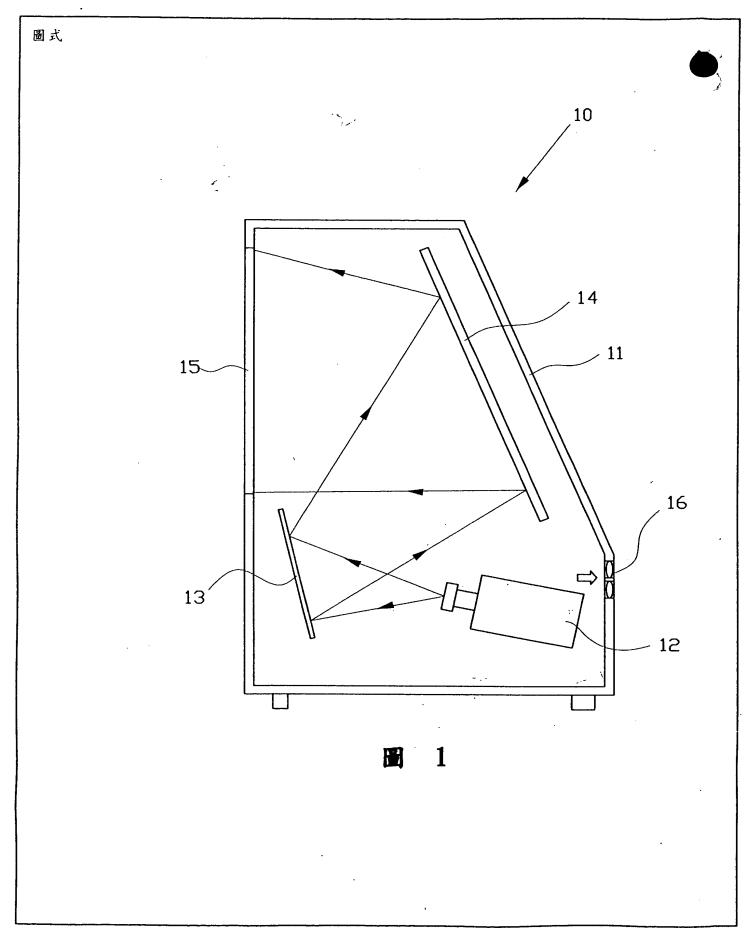
- 1. 一種背投影電視排氣結構,包含:
  - 一通風室,設在該背投影電視內部,且一側為背投影電視之殼體;
  - 一出風口,設於該通風室一側殼體上;
  - 一排氣風扇,設在該通風室相對殼體另一側;以及
  - 一導風管,一端連接於該排氣風扇,另一端連通至出風口。
- 2. 依申請專利範圍第1項所述之背投影電視排氣結構,其中該通風室相對殼體之另一側為一隔板,隔板上設一通孔裝設排氣風扇。
- 3. 依申請專利範圍第1項所述之背投影電視排氣結構,其中該通風室上方以一蓋板覆蓋。
- 4. 依申請專利範圍第1項所述之背投影電視排氣結構,其中該背投影電視內部包含一光源,排氣風扇鄰近該光源。
- 5. 依申請專利範圍第1項所述之背投影電視排氣結構,其中該出風口設一柵欄。
- 6. 依申請專利範圍第1項所述之背投影電視排氣結構,其中該導風管為彎曲形,以阻絕光束外漏。
- 7. 依申請專利範圍第1項所述之背投影電視排氣結構,其中該導風管為吸音材質。
- 8. 依申請專利範圍第1項所述之背投影電視排氣結構,其中該導風管為橡膠材質。
- 9. 依申請專利範圍第1項所述之背投影電視排氣結構,其

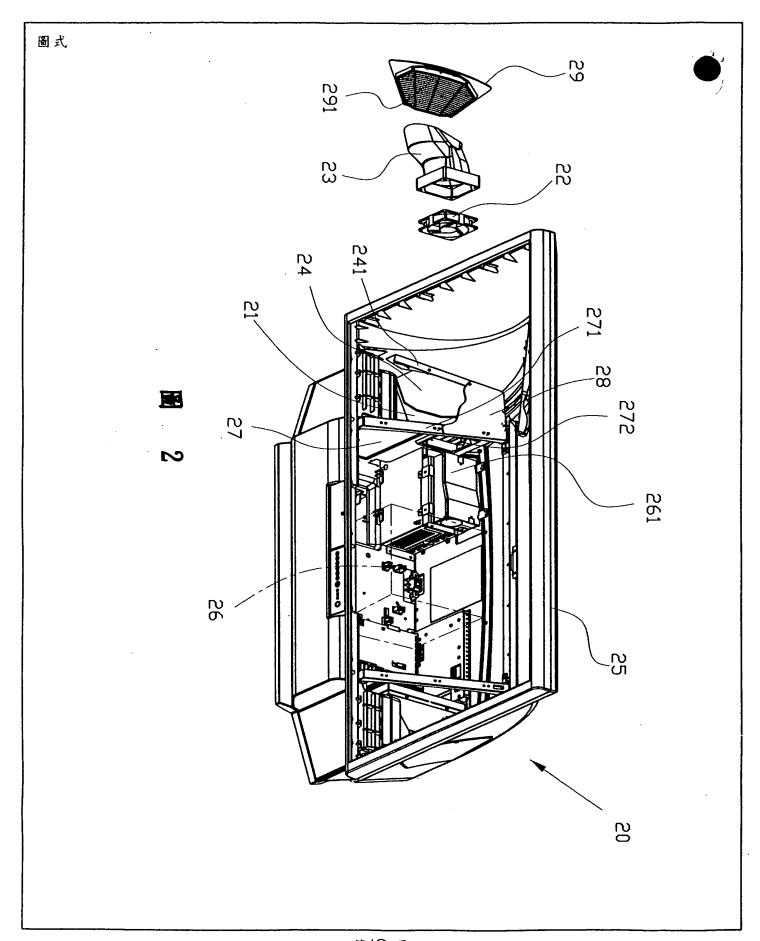


#### 六、申請專利範圍

中該殼體設通風室之一側係斜向後內縮。







第13頁

